BRUHAT BANGALORE MAHANAGARA PALIKE

Name of Work: Improvements to Roads and Asphalting at Muninagappa layout Surrounding area Dasarahalli Village in ward No 06 Thanisandra Byatarayanapura Sub Division

DETAILED ESTIMATE

Estimated Cost
Rs. 90.00 Lakh

Office of the
Executive Engineer
BYATARAYANAPURA DIVISION
Bruhat Bangalore Mahanagara Palike
Bangalore

Bruhat Bangalore Mahanagara Palike

Name of Work: Improvements to Roads and Asphalting at Muninagappa layout Surrounding area Dasarahalli Village in ward No 06 Thanisandra Byatarayanapura Sub Division

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
1	KSRRB 300 - Excavation for road, drains and similar works KSRRB 300-1. **Earthwork excavation by manual means** in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. MORTH / Chapter 3 (P.No-143, I.No-19.1)								
	Basic rate	130.00							
	Area weightage 6%	7.80							
	Sub total	137.80							
	Loading and unloading with Lead 5 km	**69.80**							
	Total	**207.60**							
	CC Drain								
	Muninagappa Lt								
	2nd cross	2	180.00	1.10	1.00	396.00			
	Cross Road - A	1	41.00	0.90	1.00	36.90			
	Cross Road - B	1	39.00	0.90	1.00	35.10			
	Cross Road - C	1	37.00	0.90	1.00	33.30			
	Cross Road - D	1	37.00	0.90	1.00	33.30			
	Cross Road - E	1	57.00	0.90	1.00	51.30			
	Road 1	1	40.00	1.10	1.10	48.40			
	Culvert	8	5.50	1.50	1.10	72.60			
						706.90	**Cum**	**207.60**	**146752.44**
2	KSRRB M2100-10. Providing and laying **Plain cement concrete of mix 1:3:6** with OPC @ 220kgs, with crushed 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates @ 0.46cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of all materials, labour, HOM curing, form works, scaffolding and centering complete as per specifications. (P.No-222,I No-27.18)								
	Basic rate	5115.00							
	6% AW	306.90							
	Sub Total	**5421.90**							
	CC Drain								
	Muninagappa Lt								
	2nd cross	2	180.00	1.10	0.15	59.40			
	Cross Road - A	1	41.00	0.90	0.15	5.54			
	Cross Road - B	1	39.00	0.90	0.15	5.27			
	Cross Road - C	1	37.00	0.90	0.15	5.00			
	Cross Road - D	1	37.00	0.90	0.15	5.00			
	Cross Road - E	1	57.00	0.90	0.15	7.70			
	Road 1	1	40.00	1.10	0.15	6.60			

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
	CC Road								
	Cross Road - A	1	41.00	5.90	0.150	36.29			
	Cross Road - B	1	39.00	4.80	0.150	28.08			
	Cross Road - C	1	37.00	5.60	0.150	31.08			
	Cross Road - D	1	37.00	5.20	0.150	28.86			
	Cross Road - E	1	57.00	5.00	0.150	42.75			
	Cross Road - F	1	58.00	3.70	0.150	32.19			
	Culvert	8	5.50	1.50	0.150	9.90			
						303.63	**Cum**	**5421.90**	**1646251.50**
3	Providing and laying plain/reinforced **cement concrete for side drains using M20** nominal mix concrete with OPC at 300 kgs. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specificationsdo- Wall & bottom thickness 15cm (I No-37.59.2,P No-271)								
	Basic rate	6670.00							
	6% AW	400.20							
	Sub Total	**7070.20**							
	CC Drain Raft								
	Muninagappa Lt								
	2nd cross	2	180.00	0.90	0.15	48.60			
	Cross Road - A	1	41.00	0.75	0.15	4.61			
	Cross Road - B	1	39.00	0.75	0.15	4.39			
	Cross Road - C	1	37.00	0.75	0.15	4.16			
	Cross Road - D	1	37.00	0.75	0.15	4.16			
	Cross Road - E	1	57.00	0.75	0.15	6.41			
	Road 1	1	40.00	0.90	0.15	5.40			
	CC Drain Wall								
	Muninagappa Lt								
	2nd cross	4	180.00	0.15	0.60	64.80			
	Cross Road - A	2	41.00	0.15	0.60	7.38			
	Cross Road - B	2	39.00	0.15	0.60	7.02			
	Cross Road - C	2	37.00	0.15	0.60	6.66			
	Cross Road - D	2	37.00	0.15	0.60	6.66			
	Cross Road - E	2	57.00	0.15	0.60	10.26			
	Road 1	2	40.00	0.15	0.60	7.20			
						187.72			
	Culvert Raft	8	5.50	1.20	0.20	10.56			
	Culvert Wall	16	5.50	0.23	0.55	11.13			
						21.69			
						209.41	**Cum**	**7070.20**	**1480567.05**

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
4	KSRRB M2200-6. Providing **T.M.T. steel reinforcement for R.C.C.** work including straightening, cutting, bending, hooking, placing in position, lapping and/or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per disign (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specification. MORTH Specification No.1600 & 2200(I No-28.8.2,P No-229)								
	Basic rate	68233.00							
	6% AW	4093.98							
	Sub Total	**72326.98**							
	70kg/cum for drain		187.72	0.07		13.14			
	90kg/cum for culvert		21.69	0.09		1.95			
						15.09	**Tn**	**72326.98**	**1091595.31**
5	Providing and fixing **RCC Precast cover slab of 100mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Data rate	2337.00							
	For Drain								
	Muninagappa Lt								
	2nd cross	2	180.00	0.90		324.00			
	Cross Road - A	1	41.00	0.75		30.75			
	Cross Road - B	1	39.00	0.75		29.25			
	Cross Road - C	1	37.00	0.75		27.75			
	Cross Road - D	1	37.00	0.75		27.75			
	Cross Road - E	1	57.00	0.75		42.75			
	Road 1	1	40.00	0.90		36.00			
						518.25	**Sqm**	**2337.00**	**1211150.25**
6	Providing and Fixing **pre cast covering Slab 250mm thick** made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge. (Data Rate)								
	Data rate	5418.00							
	Culvert	8	5.50	1.20		52.80			
						52.80	**Sqm**	**5418.00**	**286070.40**
7	KSRRB M300-14. **Excavation for roadwork** in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1km and complete as per specifications.(I No-19.14,P No-143)								
	Basic rate	41.00							
	Area Weightage 6%	2.46							
	Sub total	43.46							
	with Lead 5 km	**12.80**							
	Total	**56.26**							
	Muninagappa Lt								
	2nd cross	1	196.00	5.50	0.300	323.40			

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
	CC Road								
	Cross Road - A	1	41.00	5.90	0.300	72.57			
	Cross Road - B	1	39.00	4.80	0.300	56.16			
	Cross Road - C	1	37.00	5.60	0.300	62.16			
	Cross Road - D	1	37.00	5.20	0.300	57.72			
	Cross Road - E	1	57.00	5.00	0.300	85.50			
	Cross Road - F	1	58.00	3.70	0.300	64.38			
						721.89	**Cum**	**56.26**	**40,613.53**
8	Construction of **granular sub-base Grading-V** as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications Clause 401 of MORTH V Revision.(I No-20.5,P No-153)								
	Basic rate	1882.00							
	Area Weightage 6%	112.92							
	Total	**1994.92**							
	Muninagappa Lt								
	2nd cross	1	196.00	1.20	0.200	47.04			
						47.04	**Cum**	**1994.92**	**93,841.04**
9	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to **wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)								
	Basic rate	1888.00							
	Area Weightage 6%	113.28							
	Total	**2001.28**							
	Muninagappa Lt								
	2nd cross	1	196.00	5.50	0.250	269.50			
						269.50	**Cum**	**2001.28**	**539344.96**
10	KSRRB M500-6. Providing and **applying primer coat** with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6)								
	Basic rate	27.00							
	Area Weightage 6%	1.62							
	Total	**28.62**							
	Muninagappa Lt								
	2nd cross	1	196.00	5.50		1078.00			
						1078.00	**Sqm**	**28.62**	**30,852.36**

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
11	Providing and laying **bituminous concrete 40mm thick** with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminus binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic)(P.No-171,I No-21.78.12)								
	Basic rate	7315.00							
	Area Weightage 6%	438.90							
	Total	**7753.90**							
	Muninagappa Lt								
	2nd cross	1	196.00	5.50	0.04	43.12			
						43.12	**Cum**	**7753.90**	**334348.17**
12	**Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30** over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints,including groove cutting charges, joint filler, separation membrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound. (P.No-176,I No-22.6.1)								
	Basic rate	4916.00							
	Area Weightage 6%	294.96							
	Total	**5210.96**							
	CC Road								
	Cross Road - A	1	41.00	5.90	0.150	36.29			
	Cross Road - B	1	39.00	4.80	0.150	28.08			
	Cross Road - C	1	37.00	5.60	0.150	31.08			
	Cross Road - D	1	37.00	5.20	0.150	28.86			
	Cross Road - E	1	57.00	5.00	0.150	42.75			
	Cross Road - F	1	58.00	3.70	0.150	32.19			
						199.25	**Cum**	**5210.96**	**1038257.73**
13	KSRRB M800-13.**Road Marking** with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15)								
	Basic rate	429.00							
	Area Weightage 6%	25.74							
	Total	**454.74**							

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
	Muninagappa Lt								
	2nd cross	2	196.00	0.10		39.20			
						39.20	Sqm	454.74	17,825.81
								Total Construction Cost	7957470.53
								12% GST	954896.46
								PMC Charges	87,000.00
								Sub Total	8999366.99
								Miscellaneous & Rounding off	633.01
	GRAND TOTAL								9000000.00

Certificate

1. The workspot was inspected and works is found to be necessary.
2. The area comes within the Bruhat Bangalore Mahanagara Palike limits.
3. The rates adopted based on the PWD SR,Bangalore circle for year 2018-2019, Data Rates and issue rates Dated 03-01-2020

Assistant Engineer,
Ward no 06

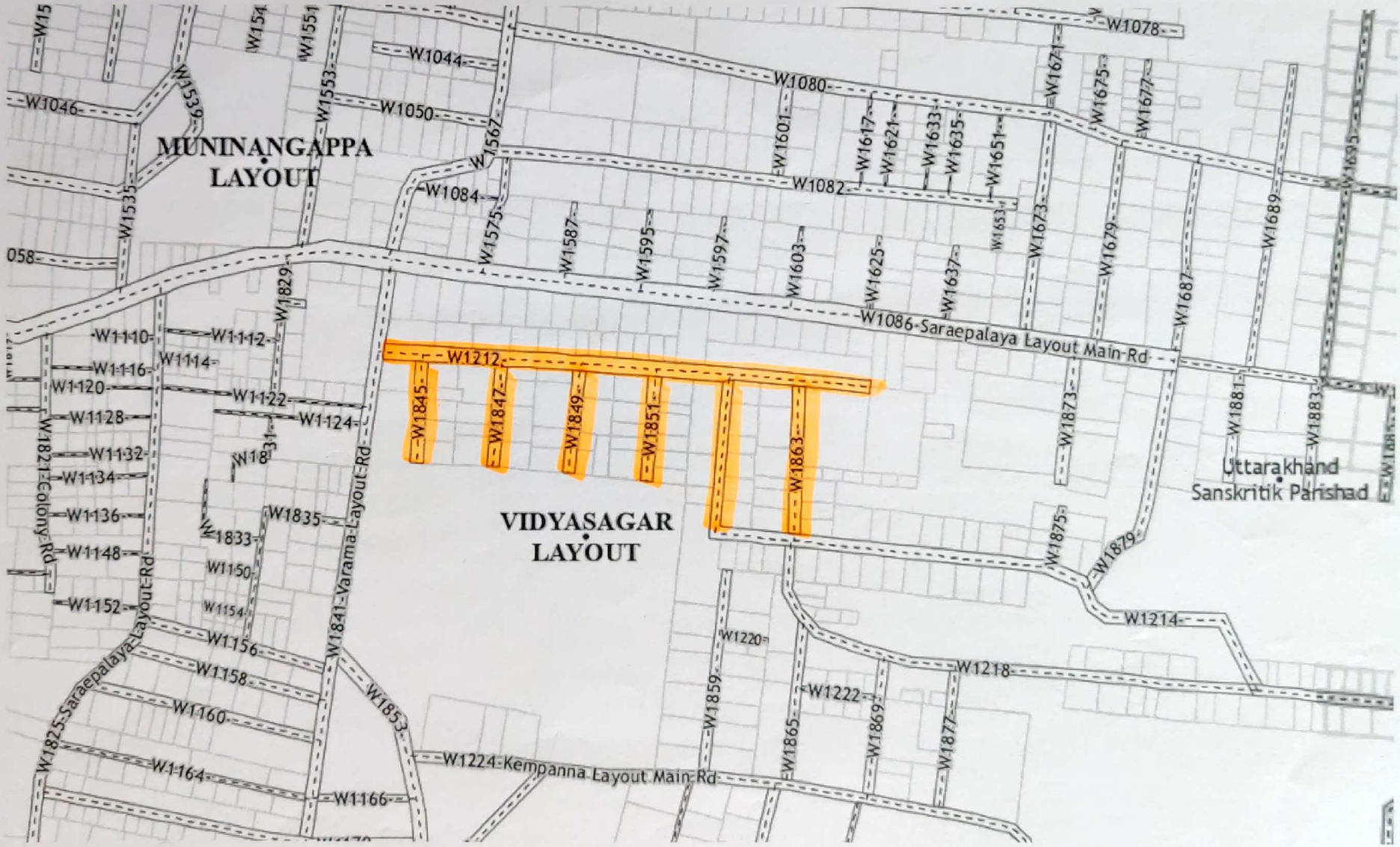
Asst. Exec. Engineer,
Dasarahalli Sub Division

Executive Engineer,
Byatarayanapura Division

ADMINISTRATIVE APPROVAL
Accorded For Rs. 90.00 Lathe only
Head of A/c. P 3726
Div. Ref. No. 12/20-21 Date 02/06/2020
AE 2/06
EE(BTP) 2/06

Technically sanctioned for Rs. 90,00,000/-
(Rs in Words) NINETY LAKH ONLY
Under P 3726
Job Code No. 006-20-000178
Registered as SE(Y)/TS/ 02 / 20-21
to conditions contained in enclosed memo
No. 02 / 20-21 Dated 2/6/2020
AE/JE TA

Name of Work: Improvements to Roads and Asphalting at Muninagappa Layout Sarrounding area Dasarahalli Village in Ward No. 06 Thanisandra Byatarayanapura Sub Division.



D-C Raghu

MUNIYAPPA LAYOUT

Sri Sri Shaneshwara Swamy Temple

H.k.g.n Chicke

Shi

1st Cross R

ASPHALT ROAD
RCC CULVERT
RCC DRAIN
CONCRETE ROAD

CLIENT: BRUHAT BANGALORE MAHANAGARA PALIKE		Assitante Engineer	Assitante Executive Engineer	Executive Engineer	Improvements to roads and Asphalting at Muniyappa layout surrounding area Dasarahalli Village in ward no 06 Thanisandra Byatarayanapua sub Division	Date Dwg no: Rev: R0

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WARD NO. 6- THANISANDRA